

What Is Claimed Is:

1. A fingerprint recognizing device comprising:

5 a transparent electrode layer to which one terminal of an AC power source is connected;

10 a light emitting layer formed on the transparent electrode layer and forming an electric field between the transparent electrode layer and a finger forming a ground contact when being contacted with the finger and emitting light by this electric field for generating an optical fingerprint image according to ridge lines of a fingerprint image formed on the finger;

15 a plurality of patterned floating electrodes arranged on the surface of the light emitting layer at a predetermined interval and turned on/off to output the optical fingerprint image; and

20 a transparent insulating layer formed at the bottom of the transparent electrode layer and for transmitting the optical image generated from the light emitting layer.

25 2. The fingerprint recognizing device of claim 1, wherein the device further comprises an insulating layer formed on the upper portions of the floating electrodes in order to prevent the penetration by impurities between the plurality of patterned floating electrodes and make the floating electrodes stronger against a wet

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finger.

3. The fingerprint recognizing device of claim 1,  
wherein the device further comprises a dielectric layer  
5 formed between the patterned floating electrodes and the  
light emitting layer in order to increase the luminance  
of the light emitting layer.

4. A method for fabricating a fingerprint  
10 recognizing device comprising the steps of:

forming a transparent insulating layer using a  
transparent insulating material;

forming a transparent electrode layer on the  
transparent insulating layer using a transparent  
15 conductive material;

mixing 25~35wt.% dielectric polymer paste, a  
25~29wt.% retarder, and 30~50wt.% dopant-doped luminous  
powder and then forming a light emitting layer on the  
top of the transparent electrode layer using the  
20 mixture; and

forming a plurality of patterned floating  
electrodes on the surface of the light emitting layer  
using a conductive material so that they are spaced at a  
predetermined interval.

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5. The method of claim 4, wherein the method  
further comprises a step for forming an insulating layer

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using an insulating material on upper portions of the floating electrodes so that the space between the plurality of patterned floating electrodes<sup>1</sup> can be buried.

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6. The method of claim 5, wherein the insulating layer is formed of a hydrophobic material.

7. The method of claim 4, wherein the method  
10 further comprises a step for forming a dielectric layer between the patterned floating electrodes and the light emitting layer in order to increase the luminance of the light emitting layer.

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